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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,117	07/11/2003	Caroline Sassano Slone	06147D USA	4103

23543 7590 10/05/2005

AIR PRODUCTS AND CHEMICALS, INC.  
PATENT DEPARTMENT  
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ALLENTOWN, PA 181951501

EXAMINER
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METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/618,117

Applicant(s)

SLONE ET AL.

Examiner

Daniel S. Metzmaier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-15 and 17-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-15, 17-19, 21-30 and 32-34 is/are rejected.
- 7) ☒ Claim(s) 20 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/11/05.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

Claims 13-15 and 17-34 are pending.

***Information Disclosure Statement***

1. The US application number 10/061,898 has been crossed off the Form PTO-1449. Please see the Form PTO-892, which cites the corresponding US 6,746,623 B2.

***Specification***

2. The disclosure is objected to because of the following informalities: the specification fails to provide a reference to the parent application as required for benefit of the parent filing date under 35 U.S.C. 120. Examination has been performed based on the parent filing date and the amendment appears to have been intended in accordance with Item 17 of the transmittal sheet filed 11 July 2003.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 24-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The scope of claims 24-29 are unclear because it is unclear whether the alkyl glycidyl ether-capped polyamine is intended to refer to the foam control agent of claim 13. To the extent applicants intend a further alkyl glycidyl ether-capped polyamine of claim 13, said alkyl glycidyl ether-capped polyamine lacks proper antecedent basis and/or reference to said foam control agent of claim 13.

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Furthermore, the concentrations in at least claims 24-26 are outside of the claimed range of 0.01 g / 100 ml to 10 gm / 100 ml since the compositions employ as little as 30 wt % or 0.01 wt % of the alkyl glycidyl ether-capped polyamine in an aqueous medium. The generic "alkyl glycidyl ether-capped polyamine" is also outside of the claimed structure of claim 13.

To the extent applicants intend a further alkyl glycidyl ether-capped polyamine, it is unclear how said alkyl glycidyl ether-capped polyamine differs from that of claim 13 and how one would determine the required concentrations in the dependent claims for the overlapping materials.

In claim 25, it is unclear how the water-borne, water-dispersible or water-soluble resin or mixtures thereof could possibly be 99 wt % since the minimum of the remaining components is greater than 1 wt %, i.e., 1.03 wt %.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

#### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 13-15, 17-19, 21-23, 30 and 32-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schäfer-Burkhard, US 4,311,618. Example 5 of the reference discloses the claimed incorporation of the claimed compounds in an aqueous cleansing composition. The foam control function would have been inherent to the compound disclosed in the Schäfer-Burkhard reference. A compound and all of its properties are generally inseparable. See *In re Papsech*, 315 F2d. 381, 137 USPQ 43, (CCPA 1963).

To the extent the Schäfer-Burkhard reference employs the HCl salt rather than the non-salt form of the compound per se, the salt form is a conventional form of adding the compounds of the claims for water solubility and dispersibility, which is the intended system being utilized instantly and in the prior art.

To the extent the Schäfer-Burkhard reference differs regarding the use of the analogous C<sub>4</sub> alkyl group rather than the C<sub>8</sub> alkyl group exemplified in the Schäfer-Burkhard reference, foaming in water-borne systems would have been expected to vary

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slightly with the hydrophobicity of the agents employed. Variation of the alkyl groups by employing less hydrophobic groups would have been expected to be less effective at controlling the foam. Applicants have provided no evidence that the length of the alkyl substituent would have been critical to the inventive compositions.

9. Claims 13-15, 17-18, 21, 32, and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Klimpel et al, US 4,797,202, in view of applicants characterization of said prior art at page 3, lines 10-13 of the instant specification.

Applicants (page 10, lines 10-13 of the instant specification) state the Klimpel et al reference discloses the use of the reaction products of diethylenetriamine and ethylhexyl glycidyl ether in a 1:1 ratio as collectors for froth floatation.

Klimpel et al (Table I, columns 7 and 8) disclose a triamine related to applicants' characterization. Klimpel et al (column 6, lines 59-60) disclose the use of the compositions at 50 g / metric ton of ore, which is 50 ppm based on the ore. Klimpel et al (column 5, lines 36-50) discloses the collectors may be employed at any concentration to achieve the desired result including 5 to 1000 g / metric ton, preferably 10 to 200 g / metric ton of ore. Said range overlaps that instantly claimed.

It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to vary the concentration of the reaction products of diethylenetriamine and ethylhexyl glycidyl ether in a 1:1 ratio as collectors for froth floatation in Klimpel et al for the advantage of achieving the desired metal values disclosed therein.

***Allowable Subject Matter***

10. Claims 20 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the compositions employing the compounds of claims 20 and 31 in water-borne composition or industrial process at 0.01 to 10 g/100 mL controlling foam as claimed is not disclosed or fairly suggested in the prior art.

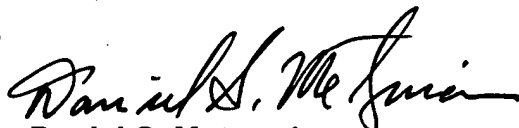
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Daniel S. Metzmaier**  
Primary Examiner  
Art Unit 1712

DSM